

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An energy consumption meter ~~comprising:~~ arrangement, having

a first input for ~~feeding~~ providing a first input signal derived from a voltage;<sub>1</sub>[[,]]

~~to which first input~~ a first analog-to-digital converter is electrically connected to the first input to generate a first output signal based on the first input signal;[[,]]

a second input for ~~feeding~~ providing a second input signal derived from a current;<sub>2</sub>[[,]]

~~to which second input~~ a second analog-to-digital converter is electrically connected to the second input to generate a second output signal based on the second input signal;[[,]]

a multiplier, ~~which combines the~~ to combine signals corresponding to the first and second output signals outputs;<sub>2</sub> ~~of the two analog-to-digital converters with one another,~~

a phase evaluation block comprising having two inputs[[,]] ~~which that are coupled~~ electrically connected to the first input and to the second input, the phase evaluation block of the energy consumption meter arrangement for the purpose of measuring to measure a phase difference that corresponds to a phase difference between the first input signal and the second input signal, and the phase evaluation block comprising having an output[[,]] ~~which that is coupled electrically connected~~ to a phase correction block;<sub>3</sub>[[,]] and

the phase correction block ~~[[,]] which is coupled~~ electrically connected to an output terminal of one of the ~~two~~ first and second analog-to digital converters, designed the phase correction block to correct for the ~~for correcting the a~~ phase difference in one of the first output signal and the second output signal ~~of the digitized signal derived from a current or a voltage.~~

2. (Currently Amended) The energy consumption meter ~~of arrangement as claimed in~~ claim 1, ~~characterized in that~~ wherein the phase evaluation block comprises means for permanently storing a phase correction value.

3. (Currently Amended) The energy consumption meter ~~arrangement as claimed in~~ claim 1, further comprising:

a first limiting amplifier to couple the first input to an input of the phase evaluation block;  
and  
a second limiting amplifier to couple the second input to an input of the phase evaluation  
block

~~characterized in that in each case one limiting amplifier is provided which couples in~~  
~~each case one input of the energy consumption meter arrangement to in each case one input of~~  
~~the phase evaluation block.~~

4. (Currently Amended) The energy consumption meter ~~of arrangement as claimed in~~ claim 1, ~~characterized in that~~ wherein the first and the second analog-to-digital converters comprise ~~are each in the form of~~ sigma-delta converters.

5. (Currently Amended) The energy consumption meter ~~of arrangement as claimed in~~ claim 1, ~~characterized in that~~ further comprising:

~~an integrator is provided which is~~ electrically connected downstream of the multiplier relative to the first and second inputs.

6. (Currently Amended) The energy consumption meter ~~arrangement of as claimed in~~ claim 1, ~~characterized in that~~ wherein the first and the second analog-to-digital converters, the phase correction block, and the phase evaluation block are ~~designed~~ implemented using integrated circuit technology.

7. (Currently Amended) The energy consumption meter ~~of arrangement as claimed in~~ claim 1, ~~characterized in that~~ further comprising:

a nonconductively coupling transfer arrangement for providing the first input signal and/or the second input signal to the first input and/or the second input, respectively ~~is~~ connected to the first input and/or to the second input for the purpose of coupling in the signal ~~derived from a voltage and/or from a current.~~

8. (Currently Amended) The energy consumption meter ~~arrangement of~~ as claimed in claim 7, ~~characterized in that wherein~~ the nonconductively coupling transfer arrangement is in ~~the form of~~ comprises a transformer.

9. (Currently Amended) The energy consumption meter ~~arrangement of~~ as claimed in claim 1, ~~characterized in that a means for generating~~ further comprising:

a test signal generator to generate a test signal, the test signal generator being electrically connected is provided which is coupled to the first input and to the second input ~~of the energy consumption meter arrangement~~.

10. (New) The energy consumption meter of claim 1, wherein the phase evaluation block comprises memory for permanently storing a phase correction value.

11. (New) The energy consumption meter claim 10, further comprising:  
a first limiting amplifier to couple the first input to an input of the phase evaluation block;  
and  
a second limiting amplifier to couple the second input to an input of the phase evaluation block.

12. (New) The energy consumption meter of claim 11, wherein the first and the second analog-to-digital converters comprise sigma-delta converters.

13. (New) The energy consumption meter of claim 12, further comprising:

an integrator electrically connected downstream of the multiplier relative to the first and second inputs.

14. (New) The energy consumption meter of claim 13, wherein the first and the second analog-to-digital converters, the phase correction block, and the phase evaluation block are implemented using integrated circuit technology.

15. (New) The energy consumption meter of claim 14, further comprising:

a nonconductively coupling transfer arrangement for providing the first input signal and/or the second input signal to the first input and/or the second input.

16. (New) The energy consumption meter of claim 15, wherein the nonconductively coupling transfer arrangement comprises a transformer.

17. (New) The energy consumption meter of claim 16, a test signal generator to generate a test signal, the test signal generator being electrically connected to the first input and to the second input.

18. (New) The energy consumption meter of claim 1:

wherein the first analog-to-digital converter is directly connected to the first input;  
wherein the second analog-to-digital converter is directly connected to the second input;  
wherein the two inputs of the phase evaluation block are connected to the first input and to the second input via amplifiers;  
wherein the output of the phase evaluation block is directly connected to the phase correction block; and  
wherein the phase correction block is directly connected to the output terminal of one of the first and second analog-to digital converters.

19. (New) The energy consumption meter of claim 1, further comprising:  
a first digital filter to alter the first output signal; and  
a second digital filter comprising the phase correction block, the second digital filter to alter the second output signal to compensate for the phase difference;  
wherein the signals combined by the multiplier comprise output signals of the first digital filter and the second digital filter.

20. (New) The energy consumption meter of claim 1, wherein at least one of the first input and the second input is DC-isolated from a signal source.